

What is Claimed is:

1. A security-protected hard disk apparatus comprising:
a magnetic storage medium;
a first container containing a substance that renders the magnetic storage medium unreadable or unusable when applied thereto;
an enclosure enclosing the magnetic storage medium and the container; and
releasing means for releasing the substance in the container to the surface of the magnetic storage medium in response to opening of the enclosure to render the magnetic storage medium unreadable or unusable.
2. A security-protected hard disk apparatus according to claim 1, wherein the enclosure is sealed to maintain a set pressure, and the pressure in the enclosure is set substantially the same as that of the container, but higher than the ambient or atmospheric pressure, and wherein the release means releases the substance when the pressure in the container becomes higher than the pressure in the enclosure.
3. A security-protected hard disk apparatus according to claim 1, wherein the container includes a port, which is arranged to face the surface of the magnetic storage medium, and the port includes a seal that opens based on the pressure difference between the container and the ambient or atmospheric pressure surrounding the container.
4. A security-protected hard disk apparatus according to claim 1, wherein the enclosure comprises an inner enclosure sealingly enclosing the container and the magnetic storage medium, and an outer enclosure sealingly enclosing the inner enclosure, wherein the inner enclosure has a movable portion adapted to press the container when the pressure in the outer enclosure becomes higher than the pressure in the inner enclosure.
5. A security-protected hard disk apparatus according to claim 4, wherein the pressure in the outer and inner enclosures is set lower than the ambient or atmospheric pressure.

6. A security-protected hard disk apparatus according to claim 4, wherein the container includes a port, which is arranged to face the surface of the magnetic storage medium, and the port includes a seal that opens when the movable portion presses the container.
7. A security-protected hard disk apparatus according to claim 1, wherein the enclosure has a lid that closes the enclosure and a fastener that secures the lid, and wherein the releasing means includes the fastener and an interlocking mechanism connected to the fastener and to the container, the interlocking mechanism allowing the fastener to be inserted inwardly and pressing the container to release the substance when an attempt is made to move the lid by releasing the fastener outwardly.
8. A security-protected hard disk apparatus according to claim 6, wherein the container includes a port, which is arranged to face the surface of the magnetic storage medium, and the port includes a seal that opens when the interlock mechanism presses the container.
9. A security-protected hard disk apparatus according to claim 1, wherein the release means includes a sensor for detecting opening of the enclosure and a valve actuating unit with a valve for actuating the valve based on the sensor detection of the opening of the enclosure, the valve actuating unit with the valve being associated with the container for releasing the substance.
10. A security-protected hard disk apparatus according to claim 1, wherein the substance dissolves or melts a magnetic storage layer of the magnetic storage medium.
11. A security-protected hard disk apparatus according to claim 10, wherein the substance also includes fine particles that adhere to the surface of the magnetic storage medium.
12. A security-protected hard disk apparatus according to claim 1, wherein the enclosure further includes a second container containing neutralizer for neutralizing the substance in the first container and neutralizer releasing means for releasing the neutralizer in the second container to the surface of the magnetic storage medium in response to opening of the enclosure.

13. A security-protected hard disk apparatus according to claim 12, wherein the substance is acid for dissolving or melting a magnetic storage layer of the magnetic storage medium and the neutralizer is alkaline for neutralizing the acid.

14. A security-protected hard disk apparatus according to claim 13, wherein the alkaline releasing means releases the alkaline after a predetermined period elapses after the acid is released.

15. A security-protected hard disk apparatus according to claim 13, further including a sensor for detecting opening of the enclosure, wherein the acid releasing means and the alkaline releasing means each include the sensor and a heater for heating the respective first or second container to release the content therein based on the detection of the enclosure opening, wherein heater of the second container heats after a predetermined period lapses after the detection of the enclosure opening.

16. A security-protected hard disk apparatus according to claim 13, wherein each of the first and second containers has a double-walled configuration, including an internal container and an outer container enclosing the internal container, the internal container sealingly containing the respective acid or alkaline and set at a pressure of 1 ATM or higher, and including a heater for heating at least a portion of the internal container.

17. A security-protected hard disk apparatus according to claim 13, wherein the first container has a double-walled configuration, including an inner container sealingly containing the acid at a pressure of 1 ATM or higher, and an outer container holding the inner container, and wherein the second container sealingly contains the alkaline at a pressure of 1 ATM or higher, and the second container and the internal container of the first container each include a heater for unsealing the respective container.

18. A security-protected hard disk apparatus according to claim 16, the acid releasing means includes a nozzle pipe having a plurality of nozzles opening toward the surface of the magnetic storage medium, and piping connecting the nozzle pipe to an outlet of the outer container of the

first container, and the alkaline releasing means includes piping connecting the nozzle pipe to an outlet of the outer container of the second container.

19. A security-protected hard disk apparatus according to claim 17, wherein the acid releasing means includes a nozzle pipe having a plurality of nozzles opening toward the surface of the magnetic storage medium, and piping connecting the nozzle pipe to an outlet of the outer container of the first container.

20. A security-protected hard disk apparatus according to claim 19, wherein the alkaline releasing means also includes piping for connecting the nozzle pipe to the outlet of the alkaline container.

21. A security-protected hard disk apparatus according to 16, wherein at least the inner containers of the first and second containers are formed of glass, ceramic, or polymer resin.

22. A security-protected hard disk apparatus according to 17, wherein the second container and at least the inner containers of the first container are formed of glass, ceramic, or polymer resin.

23. A security-protected hard disk apparatus for a magnetic storage medium, comprising:
a first container containing a substance that renders the magnetic storage medium unreadable or unusable when applied thereto;
an enclosure for enclosing the container and the magnetic storage; and
releasing means for releasing the substance in the container to the surface of the magnetic storage medium in response to opening of the enclosure to render the magnetic storage medium unreadable or unusable.

24. A security-protected hard disk apparatus for a magnetic storage medium according to claim 23, further including a second container and neutralizer releasing means in the enclosure, the second container containing a neutralizer for neutralizing the substance in the first container

and the neutralizer releasing means is for releasing the neutralizer in the second container to the surface of the magnetic storage medium in response to opening of the enclosure.

25 A method of disabling a magnetic storage medium to prevent reading or accessing thereof, comprising the steps of:

enclosing the magnetic storage in an enclosure;

providing in the enclosure a container containing a substance that renders the magnetic storage medium unreadable or unusable when applied thereto; and

releasing the substance in the container to the surface of the magnetic storage medium when the enclosure is opened or exposed to the ambient or atmospheric pressure to render the magnetic storage medium unreadable or unusable.

26. A method according to claim 25, further including the step of releasing a neutralizer at least to the magnetic storage medium to neutralize the substance.

27. A method according to claim 25, further including the step of releasing a neutralizer to the inside of the enclosure to neutralize the substance.